Why teach vocabulary?

Essential knowledge for all staff working in the Best Start Federation

Introduction

Of the many compelling reasons for actively and systematically teaching vocabulary, none is more important than the contribution of word knowledge to reading comprehension. Indeed, one of the most enduring findings in reading research is the extent to which students' vocabulary knowledge relates to their reading comprehension (e.g., Anderson & Freebody, 1981; Baumann, Kame'enui, & Ash, 2003; Becker, 1977; Davis, 1942; Whipple, 1925). Comprehension development cannot be understood without a critical examination of the role played by vocabulary knowledge. Given that success in school and beyond depends in great measure upon the ability to read with comprehension, there is an urgency to providing instruction that equips children with the skills and strategies necessary for lifelong vocabulary development.

What Is Vocabulary?

Broadly defined, vocabulary is knowledge of words and word meanings. However, vocabulary is more complex than this definition suggests. First, words come in two forms: oral and print. Oral vocabulary includes those words that we recognise and use in listening and speaking. Print vocabulary includes those words that we recognise and use in reading and writing. Second, word knowledge also comes in two forms, receptive and productive. Receptive vocabulary includes words that we recognise when we hear or see them. Productive vocabulary includes words that we use when we speak or write. Receptive vocabulary is typically larger than productive vocabulary, and may include many words to which we assign some meaning, even if we don't know their full definitions and connotations – or ever use them ourselves as we speak and write (Kamil & Hiebert).

One of the most persistent findings in reading research is that the extent of students' vocabulary knowledge relates strongly to their reading comprehension and overall academic success (see Baumann, Kame'enui, & Ash, 2003; Becker, 1977; Davis, 1942; Whipple, 1925). This relationship seems logical; to get meaning from what they read, students need both a great many words in their vocabularies and the ability to use various strategies to establish the meanings of new words when they encounter them.

Vocabulary and phonics

This particular relationship between vocabulary knowledge and reading comprehension seems clear. But vocabulary knowledge contributes to reading success in other important ways that are perhaps less obvious. For beginning readers, evidence indicates a link between word knowledge and phonological awareness. Young children who have a large number of words in their oral vocabularies may more easily analyse the representation of the individual sounds of those words (see Goswami, 2001; Metsala & Walley, 1998). In addition, vocabulary knowledge helps beginning readers decode, or map spoken sounds to words in print. If children have the printed words in their oral vocabulary, they can more easily and quickly sound out, read, and understand them, as well as comprehend what they are reading. If the words are not in children's oral vocabulary, they have trouble reading the words and their comprehension is hindered (National Reading Panel, 2000). Thus, an extensive vocabulary is the bridge between the word-level processes of phonics and the cognitive processes of comprehension (Kamil & Hiebert, in press).

What is it to 'know a word'? How do you know you know a word?

Nagy and Scott (2000) identify several dimensions that describe the complexity of what it means to know a word. First, word knowledge is *incremental*, which means that readers need to have many exposures to a word in different contexts before they "know" it. Second, word knowledge is *multidimensional*. This is because many words have multiple meanings (e.g., *sage*: a wise person; an herb) and serve different functions in different sentences, texts, and even conversations. Third, word knowledge is *interrelated* in that knowledge of one word (e.g., *urban*) connects to knowledge of other words (e.g., *suburban*, *urbanite*, *urbane*).

Dependence on a single vocabulary instruction method will not result in optimal learning. A variety of methods was used effectively with emphasis on multimedia aspects of learning, richness of context in which words are to be learned, and the number of exposures to words that learners receive.

What the National Reading Panel Says About the Role of Vocabulary in Reading Instruction

(Reprinted from National Reading Panel, 2000, p. 4-4)

1. There is a need for direct instruction of vocabulary items required for a specific text.
2. Repetition and multiple exposure to vocabulary items are important. Students should be given items that will be likely to appear in many contexts.
3. Learning in rich contexts is valuable for vocabulary learning. Vocabulary words should be those that the learner will find useful in many contexts. When vocabulary items are derived from content learning materials, the learner will be better equipped to deal with specific reading matter in content areas.
4. Vocabulary tasks should be restructured as necessary. It is important to be certain that students fully understand what is asked of them in the context of reading, rather than focusing only on the words to be learned. Restructuring seems to be most effective for low achieving or at-risk students
5. Vocabulary learning is effective when it entails active engagement in learning tasks.
6. Computer technology can be used effectively to help teach vocabulary.
7. Vocabulary can be acquired through incidental learning. Much of a student's vocabulary will have to be learned in the course of doing things other than explicit vocabulary learning. Repetition, richness of context, and motivation may also add to the efficacy of incidental learning of vocabulary.

Oral Language Experiences at Home

Young children who don't have large vocabularies or effective word-learning strategies often struggle to achieve comprehension. Their bad experiences with reading set in motion a cycle of frustration and failure that continues throughout their schooling (Hart & Risley, 2003; Snow, Barnes, Chandler, Goodman, & Hemphill, 2000; White, Graves, & Slater, 1990). Because these children don't have sufficient word knowledge to understand what they read, they typically avoid reading. Because they don't read very much, they don't have the opportunity to see and learn very many new words. This sets in motion the well known "Matthew Effects," Stanovich's (1986) application of Matthew, 25:29–"the rich get richer and the poor get poorer." In terms of vocabulary development, good readers read more, become better readers, and learn more words; poor readers read less, become poorer readers, and learn fewer words.

Logic suggests that the more oral language experiences children have in their early years, the more words and word meanings they acquire. It is the kind and extent of these early oral language experiences that profoundly affect children's later reading and school success. Young children whose experiences include hearing a lot of language and being encouraged to use and experiment with language themselves tend to achieve early reading success; children who have limited experiences with language often have trouble learning to read, and as they progress through school, they remain at risk for reading and learning problems (see Dickinson & Tabors, 2001; Storch & Whitehurst, 2002).

Word Poverty

(Moats, 2001)

Researcher Louisa Moats refers to the gap in word knowledge between advantaged and disadvantaged children as "word poverty." In her study of the language abilities of kindergarten students in a large city district, Moats found that many children were unable to name pictures that showed the meanings of words such as *sewing* or *parachute*.

The word-knowledge gap between groups of children begins long before the children enter school. Hart and Risley (1995) found, for example, that 3- year-olds in higher socioeconomic status (SES) families had vocabularies as much as five times larger than children in lower SES families. Children in higher SES homes engaged in many interactive discussions with their parents. Their parents helped build the children's language use and knowledge through extensive repetitive and interactive talk, such as the following:

Child: Look! I painted.
Parent: You painted the whole picture by yourself?

By expanding upon and repeating the child's statement as a question, the parent signals a request for the child to tell more. In contrast, Hart and Risley found that children in lower SES families had many fewer such experiences. These children more often heard imperatives such as, "Get down!" or "Don't do that!"

This last point is important in light of research showing that the sophistication of language children hear and participate in is a stronger predictor of their later vocabulary knowledge than is the number of words that they hear and speak (Weizman & Snow, 2001). For students without extensive oral language experiences,

both English-speaking and English language learners, it's especially important to hear oral English that incorporates the vocabulary they will encounter in school texts.

Oral Language Experiences at School

Once children begin school, the teacher talk they hear throughout the day poses opportunities to familiarize them with the kind of oral language that promotes vocabulary growth. Yet, researchers have found that talk in primary and elementary school classrooms is often limited to commonly recognised words and largely involves concrete talk about the "here and now" (Dickinson & Tabors, 2001; Snow, Tabors, Nicholson, & Kurland, 1995). Concrete talk in the form of display questions (e.g., *What colour is this? How many are there?*) has been observed to be prevalent in both preschool (Dickinson & Tabors, 2001) and in elementary classrooms (Snow et al., 2000; see also, Dickinson & Smith, 1994).

To counteract these frequently reported patterns, one group of researchers designed and implemented an intervention called PAVEd for Success (for the two primary features of the program: phonological awareness and vocabulary enhancement) with classes of preschool children (Schwanenflugel et al., in press).

Analyses of the interventions show that children in classrooms in which teachers consistently engaged children in interactive teacher-child talk and storybook reading ended up with larger vocabularies than did children who served as controls.

Making Word Learning Part of Daily Routines

Researchers have suggested numerous ways to create opportunities for interactive classroom talk as well as to expose children to new (and often intriguing) words throughout the school day. For example, rather than reminding a student that he didn't quite close the door, the teacher might tell the child to close the door because it is *ajar*. Rather than asking a student to water a drooping plant, the teacher might say that the plant is becoming *dehydrated*. Rather than telling students to line up faster, the teacher might ask them to stop *dawdling*. (See Dickinson & Tabors, 2001; Graves, Juel, & Graves, 2004; Johnson et al., 2004; Stahl, 1999.)

As important as oral language experiences are, they are not sufficient by themselves to ensure the kind of vocabulary growth that will lead to improved reading comprehension. One reason is that most oral language – the kind of language we use in daily conversations with people we know – lacks the varied word use found in

written language. Hayes and Ahrens' (1988) analysis demonstrated the difference in word use in oral and written language. These researchers found that children's books contained almost twice as many infrequently used or rare words than even adult conversation among college graduates. And it's the exposure to infrequently used or rare words that students need if they are to acquire the vocabulary that will enable them to comprehend their increasingly complex school texts. For example, whereas we might say we're *putting* salt on our food, a character in a children's book might be described as *sprinkling* salt on his. We may refer to a storm coming, but in a children's book, the storm might *threaten* or *loom on the horizon*.

Frequency of Word Use in Major Sources of Oral and Written Language (Hayes & Ahrens, 1988)

	Rare Words per 1,000
I. Printed texts	
Abstracts of scientific articles	128.0
Newspapers	68.3
Popular magazines	65.7
Adult books	52.7
Children's books	30.9
Preschool books	16.3
II. Television texts	
Prime-time adult shows	22.7
Prime-time children's shows	20.2
III. Adult speech	
Expert witness testimony	28.4
College graduates talk to friends/spouses	17.3

Incidental Word Learning Through Teacher Read-Alouds

Because children's books often contain rich and descriptive language, reading them aloud to student can be an excellent way to focus their attention on words. It's not surprising, then, that reading aloud children's books has been found to increase the vocabularies of students from preschool through the elementary grades (e.g., Dickinson & Smith, 1994; Elley, 1989; Penno, Wilkinson, & Moore, 2002; Robbins & Ehri, 1994; Stahl, Richek, & Vandevier, 1991).

However, reading aloud by itself is not sufficient to either build vocabulary or to increase comprehension. To understand a story, students must relate their existing knowledge to the words and ideas in the story. This can be a challenging task, especially for young children with limited oral vocabularies (Whitehurst et al. 1994). Some researchers contend that the real value of reading aloud activities for vocabulary growth lies not in the reading alone, but in the teacher-student talk that accompanies the reading. The value of talk around book reading lies in the way it can promote students' familiarity with new, or rare, words (Dickinson & Smith, 1994). Beck and McKeown (2001) emphasize that it is through the talk surrounding read-aloud activities that students gain experience with "decontextualized" book language – that is, the language that represents ideas and concepts.

How Wide Reading Can Aid Vocabulary Growth

(Stahl, 1999)

Much of a student's annual growth in reading can come from incidental learning.

- If Jacob, a grade 5 student, reads for one hour each day, five days a week (both in and out of school), at a fairly conservative rate of 150 words per minute, he will encounter 2,250,000 words in his reading over a school year.
- If 2 to 5 percent of the words Jacob encounters are unknown to him, he will encounter from 45,000 to 112,500 unknown words.

If, as research has shown, students can learn between 5 and 10 percent of previously unknown words from a single reading, Jacob will learn, at minimum, 2,250 new words each year from his reading.

Reading and talking to children is not enough – we also need intentional, explicit instruction. Which words to teach?

Usefulness and Frequency. Beck et al. (2002) propose that teachers should place major consideration on words' usefulness and frequency of use. To help in this endeavour, they categorized words into three tiers:

- Tier One consists of words such as *clock*, *baby*, and *happy* whose meanings students are likely to know.
- Tier Two is made up of words such as *fortunate*, *maintain*, and *merchant* that are "likely to appear frequently in a wide variety of texts and in the written

and oral language of mature language users" (2002, p. 16), but whose meanings students are less likely to know.

- Tier Three is made up of words such as *irksome*, *pallet*, and *retinue* that appear in text rarely. Although these rare words are often unknown to students, their appearance in texts is limited to one or two occurrences, and because they are often specific to particular content, students can use the context of texts to establish their meaning.

Beck et al. (2002) suggest that for instructional purposes, teachers should ignore Tier One and Tier Three words and concentrate on Tier Two words. Their argument is that most students already know Tier One words and that Tier Three words should be taught at point of contact, or as they occur in reading. Tier Two words, however, appear often in student texts, so they are the words that can add most to students' language knowledge.

Tier Two words include:

(1) words that are characteristic of mature language users and appear frequently across a variety of contexts;

(2) words that lend themselves to instruction and that can be worked with in a variety of ways so that students can build in-depth knowledge of them and their connections to other words and concepts;

(3) words that provide precision and specificity in describing a concept for which the students already have a general understanding (Beck et al., 2002).

Teachers can identify Tier Two words by deciding whether their students already have ways to express the concepts represented by the new words. Beck et al. (2002) propose that teachers ask themselves whether their students will be able to explain the new words by using words they already know. If so, this suggests that the new words offer students more precise or sophisticated ways of referring to concepts they already know something about.

Some Criteria for Identifying Tier Two Words (Beck et al., 2002, p. 19)

- **Importance and Utility:** Words that are characteristic of mature language users and appear frequently across a variety of domains.
- **Instructional Potential:** Words that can be worked with in a variety of ways so that students can build deep knowledge of them and of their connections to other words and concepts.

- **Conceptual Understanding:** Words for which students understand the general concept but provide precision and specificity in describing the concept.

Amended extracts from **A Focus on Vocabulary**

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Emergence of the problem
Hart & Risley 1995

- **What doesn't matter: race/ethnicity, gender, birth order**
- **What does matter: relative economic advantage**

In a typical hour:

Family status	**Differences in quantity**	**Differences in quality**
Welfare	616 words	5 affirmations, 11 prohibitions
Working class	1,251 words	12 affirmations, 7 prohibitions
Professional	2,153 words	32 affirmations, 5 prohibitions

Cumulative vocabulary experiences

	Words heard per hour	**Words heard in 100 hour week**	**Words heard in a 5,200 hour year**
Welfare	616	62,000	3 million
Working class	1,251	125,000	6 million
Professional	2,153	215,000	11 million